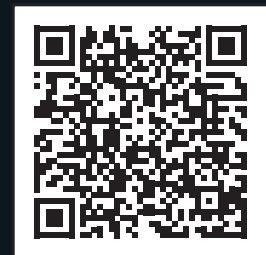


VIRGINIA MATHEMATICS PATHWAYS INITIATIVE

MODERNIZING
TODAY'S
MATHEMATICS
EDUCATION
TO PREPARE
STUDENTS
FOR THE NEXT
GENERATION



Updated: June 2021

ENHANCING MATHEMATICS FOR ALL STUDENTS



The demands of today's workforce for core skills, data literacy, and the 5 C's require redesigning and modernizing the current mathematics curriculum to prepare all students for their postsecondary aspirations. [To learn more about the 5 C's, head to the Virginia is for Learner's website.](#)

VMPI PROJECT GOALS



- Ensure that high-quality mathematics learning opportunities are available to all students
- Empower every student to be an active participant in an increasingly quantitative world
- Encourage all students to see themselves as knowers and doers of mathematics
- Identify K-12 mathematics pathways that prepare every student for their future aspirations
- Continue collaborating with stakeholders to modernize mathematics instruction for all Virginia students

TENTATIVE VMPI TIMELINE

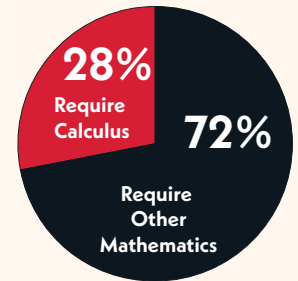


2020-2021	Develop Essential Concepts
2021-2022	Revision Committee – Draft 2023 Math SOL
2022-2023	Board of Education Review of Draft 2023 Math SOL
2023-2024	Board of Education Approval Request 2023 Math SOL
2024-2025	Crosswalk Year 2023 Math SOL
2025-2026	Full Implementation of Revised Math SOL



VMPI DATA

NOT ALL COLLEGE MAJORS NEED CALCULUS!

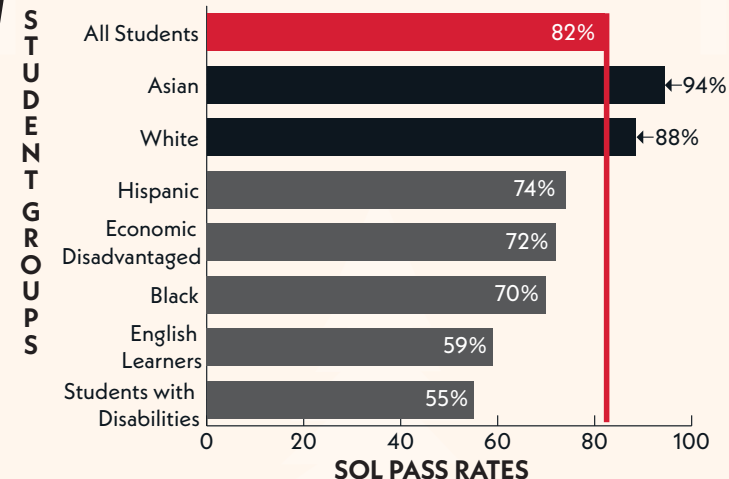


SOURCE: Degrees of Freedom: Diversifying Math Requirements for College Readiness (Burdman, 2015)

HIGH-QUALITY MATHEMATICS LEARNING OPPORTUNITIES FOR ALL STUDENTS

Increasing opportunities and removing barriers for every student to learn and understand the mathematics necessary to achieve their education and career goals

MATHEMATICS SOL PASS RATES - SPRING 2019



SOURCE: The August 13, 2019 VDOE News Release on the VDOE website.

**EVERYONE
IS A MATH PERSON!**

MATHEMATICS PATHWAYS FOR THE NEXT GENERATION!

The graphic illustrates the mathematics pathways through which students would progress from Kindergarten through high school graduation and into the future. Decisions about how and when students take specific courses will remain with students and school divisions based on individualized learning needs.

FOUNDATIONAL MATHEMATICS CONCEPTS

Foundational Mathematics Concepts address the core concepts currently included in the Grades K-7 Mathematics Standards of Learning.

Standards are identified for courses in grades K-7 and include the following concepts:

- Number and Number Sense
- Computation and Estimation
- Measurement and Geometry
- Probability and Statistics
- Patterns, Functions, and Algebra

PATHWAY FOCUSED CONCEPTS

Standards are identified for a core set of high school courses.

Student-selected ½-credit and 1-credit course options could include Dual Enrollment, International Baccalaureate, and Advanced Placement. Courses will target concepts such as:

- Data Science
- Probability and Statistics

- Geometry and Design
- Trigonometric Applications
- Advanced Algebra and Precalculus
- Mathematical and Financial Modeling
- Discrete Mathematics for Computing
- Sets and Logic
- Computer Science
- Quantitative Reasoning
- Calculus

ESSENTIAL MATHEMATICS CONCEPTS

Essential Mathematics Concepts address the core concepts currently included in the Grade 8 Mathematics, Algebra I, Geometry, and Algebra II Standards of Learning (2016).

Standards are identified for courses in Essential Concepts I, II, and III and include the following concepts:

- Investigating with Data
- Modeling with Functions
- Reasoning with Geometric Figures
- Making Sense of Algebraic Expressions, Equations, and Inequalities

CAREER CLUSTERS

- Agriculture and Natural Resources
- Architecture and Construction
- Arts and Communication
- Business Management
- Education
- Energy
- Finance
- Government and Public Domain

- Health
- Hospitality and Tourism
- Human Services
- Information Technology
- Law and Public Safety
- Manufacturing
- Marketing
- STEM
- Transportation and Logistics

More CTE Career Clusters information [can be found on the VDOE website.](#)

START

KINDERGARTEN